

## SWBAT

apply velocity vectors to  
a launcher


Sep 4-7:31 AM

**Welcome!!!**

SECA CP Physics  
Thursday 7 January 2016

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Room C-244

Centering  
(circle)

 PEDs with Passing

- Show me you are passing on SchoolView, or secure phone!
- Vector packet
- Pg 53 video notes

**Opening Activity - Quick Write!** PROJECTILE

For our launcher: what are our  
"knowns" and "unknowns" (for x & y)?

x y

$\Delta x = 1.40\text{m}$   $a_y = -9.81\text{m/s}^2$

$\Delta t = t_2 - t_1 = 0.57\text{s} \rightarrow \Delta t = 0.57\text{s}$

$V_x = ?$   $V_{iy} = ?$

$V_{fy}$   
 $\Delta y$

d.  $V_x = \frac{\Delta x}{\Delta t}$

Circle: d.  $y \approx h$

Favorite season, why?

What do you need to write up our project?

WE WILL WRITE UP LAUNCHER PROJECT

NEED: • 2-3 DAYS CLASS TIME  
(TODAY = 1/2 DAY, FRIDAY = 1 DAY)

- RUBRIC
- VERBAL COLLABORATION/  
BRAINSTORMING, BUT  
INDIVIDUAL PROJECT (NO  
USING OTHER PEOPLE'S WORDS).

Sep 7-7:04 AM

## What we should have solid:

Memorize our 5 vocab cards, units, vector or not, definition, formula

Be able to answer distance vs displacement questions

Be able to make measurements of real-life motion. Know what is likely to make timing things difficult and how to get more reliable timing results

Be able to convert between miles and meters, between hours, minutes, and seconds

Be able to calculate speed = dist/time and velocity = disp/time

Know what all of the symbols in the UAM equations stand for and mean

Be able to turn a UAM word problem into a list of knowns and unknowns

Be able to pick the equation with those 4 things in it

Be able to put the knowns into that equation

(Be able to solve for the unknown)

→ PROJECTILES:  $V_x$  IS CONSTANT;  $V_y$  CHANGES;  $a_y = -9.8 \text{ m/s}^2$  PG 42  
 PG 43 TIME,  $\Delta t$ , CONNECTS  $x$  &  $y$   
 PG 49 VECTORS INTO  $x$  &  $y$ , ADD VECTORS  
 SOH - CAH - TOA

QW every day to review? Volunteer answers on board?

Dec 4-9:15 AM

Unit	Chapters	Date
Left-Side Items	Page	Right-Side Items
REFLECTION ON NOTES	2	Ed Ed Adam Savage
HOW FAR FROM BRIDGE	4	"FORT STUEBEN"
REFLECTION ON NOTES	6	Hmwk: BASIC UNITS
PR: DISTANCE & DISPLACEMENT	8	Hmwk: FP DISPLACEMENT
DIAGRAM & STEPS	10	TIMING & ERROR
SUMMARY OF TIMING	12	How to BUILD a TABLE
PR: CONVERTING SOLNS	14	Hmwk: FP CONVERSIONS
PR: VELOCITY & SPEED	16	Hmwk: FP SPEED & VELOCITY
SPEED WORD PROBLEMS	18	ALGEBRA FOR PHYSICS
LAB JOURNAL 10/7	20	LAB JOURNAL 10/8
LAB JOURNAL 10/12	24	Hmwk: FP GRAPH POSITION
26	USE FOR PROJECT	27
OBSERVATIONS OF ORF	28	FP: INTRO TO ACC.
REVIEW FOR TEST	30	BALL ON RAMP
VECTORS, DIRECTION	32	FP: BASIC ACC EXAMPLE
PRACTICE UAM	34	FP: INTRO TO UAM
FALLING OBJECTS PACKET	36	FP: INTRO TO FREEFALL
MY FREE FALL WORD PROBLEM	38	3-ACT FALLING GLOWSTICK
Toy popper experiment	40	Free fall class solutions
Launched vs. Dropped	42	FP: INTRO TO PROJECTILE MOTION
PROJECTILE SIMULATOR	44	FP: PROJ. MOTION PROBLEM
PROJ'L PRACTICE PROB	46	PROJECTILES PRACTICE
OUR VECTOR PRACTICE	48	FP - INTRO TO VECTOR COMPONENTS
VECTOR PACKET	50	NOTES ON ADDING VECTORS
MEASURE LAUNCHER	52	NOTES ON FINDING $v_x$ & $v_y$

Sep 5-9:09 AM